

### **Abstract**

A method and apparatus are provided for reducing distortion in a dynamically delayed digital sample stream of an imaging system. The method includes the steps of delta-sigma modulating an input analog signal of the imaging system at a frequency above the Nyquist frequency of the input analog signal to generate a digital sample stream and  
5 changing a length of the sample stream to delay a portion of the sample stream while maintaining synchronism between a delta-sigma modulator and a demodulator of the system.